## Claim Amendments

Please amend the claims as follows:

Claims 1-37 (canceled)

38. (currently amended) A method for forming a chamber having a controllable interior environment for preparing an array of biopolymers on the surface of a support, said method comprising:

(a) disposing a separate top element and a separate bottom element relative to one another to form a gap therebetween, and

(b) introducing a gas into said gap, a pressure of said gas being sufficient to form an aerodynamic seal between said top element and said bottom element thereby forming said chamber wherein said top element or said bottom element is movable in a linear direction with respect to the other during said aerodynamic seal.

39. (previously presented) A method according to Claim 38 wherein said gas is introduced adjacent a perimeter of said top element and a perimeter of said bottom element.

40. (original) A method according to Claim 38 wherein said bottom element comprises side walls and said gas is introduced through openings in said side walls of said bottom element.

41. (previously presented) A method according to Claim 40 wherein said gas is introduced at a pressure of about 20 to about 50 psi.

42. (original) A method according to Claim 40 comprising introducing a second gas into the interior of said chamber after step (b).

43. (previously presented) A method according to Claim 42 wherein a flow of said second gas through the interior of said chamber is substantially uniform.

44. (previously presented) A method according to Claim 42 wherein a flow of said second gas within the interior of said chamber is dispersed.

45. (previously presented) A method according to Claim 42 wherein a flow of said second gas is dispersed as it enters said chamber.

46. (original) A method according to Claim 42 wherein said second gas is selected from the group consisting of nitrogen, argon, neon and helium.

47. (previously presented) A method according to Claim 38 wherein said gas is introduced into an interior of said chamber and flows outwardly therefrom through said gap.

48. (previously presented) A method for synthesizing an array of biopolymers on a support, said method comprising:

(a) performing a step in the synthesis of an array of biopolymers on a support in a reaction chamber formed between two elements disposed relative to one another in a sealed, movable relationship, wherein said support and one of said elements is moved relative to the other of said elements during said performing,

(b) removing said support from said reaction chamber, and

(c) optionally repeating steps (a) through (b) until said array of biopolymers is formed.

49. (previously presented) A method according to Claim 48 wherein said reaction chamber is formed by disposing two elements relative to one another to form a gap therebetween, and introducing a gas into said gap to form a sealed reaction chamber comprising said two elements.

50. (previously presented) A method for synthesizing an array of biopolymers on a support, said method comprising:

(a) introducing a support into a reaction chamber formed between a separate top element and a separate bottom element disposed relative to one another to form a gap therebetween, said a top element having sealingly affixed therein at least a portion of a device for dispensing reagents, said bottom element being adapted for introduction of a support therethrough, wherein a gas is introduced into said gap, a pressure of said gas being sufficient to form an aerodynamic seal between said top element and said bottom element thereby forming said chamber, and wherein said top element or said bottom element is movable with respect to the other during said aerodynamic seal

(b) bringing said support and a dispensing system for dispensing reagents for the synthesis of said biopolymers into a dispensing position relative to discrete sites on said surface of said support by moving said support and said bottom element relative to said top element,

(c) activating said support if said support is not already activated and dispensing said reagents to said discrete sites to perform a step of said synthesis,

(d) removing said support and/or said dispensing system from said relative dispensing position, and

(e) optionally repeating steps (a) through (d) until said array of biopolymers is formed.

51. (previously presented) A method according to Claim 50 wherein said gas is introduced adjacent a perimeter of said top element and a perimeter of said bottom element.

52. (original) A method according to Claim 50 wherein said gas is introduced through openings in side walls of said bottom element.

53. (previously presented) A method according to Claim 50 wherein said gas is introduced at a pressure of about 20 to about 50 psi.

54. (previously presented) A method according to Claim 50 comprising introducing a second gas into an interior of said chamber after step (b).

55. (previously presented) A method according to Claim 54 wherein a flow of said second gas through the interior of said chamber is substantially uniform.

56. (previously presented) A method according to Claim 54 wherein a flow of said second gas within the interior of said chamber is dispersed.

57. (original) A method according to Claim 54 wherein said second gas is selected from the group consisting of nitrogen, argon, neon and helium.

58. (original) A method according to Claim 50 wherein said reagents are monomer addition reagents.

59. (original) A method according to Claim 50 wherein an array of said biopolymers is synthesized on said support.

60. (original) A method according to Claim 50 wherein said biopolymers are polynucleotides or polypeptides.

61. (original) A method according to Claim 50 wherein said biopolymers are synthesized on said surface in multiple arrays and said support is subsequently diced into individual arrays of biopolymers on a support.

62. (previously presented) A method according to Claim 50 for synthesizing an array of biopolymers on a surface of a support, said method comprising adding one or more polymer subunits at each of multiple feature locations on said support during each of multiple rounds of subunit additions wherein each round of subunit additions comprises:

(a) introducing said support into said reaction chamber,

(b) bringing said support and a dispensing system for dispensing said polymer subunits for the synthesis of said biopolymers into a dispensing position relative to said discrete sites on said surface,

(c) dispensing said polymer subunits to said discrete sites, and

(d) removing said support and/or said dispensing system from said dispensing position.

63. (original) A method according to Claim 50 wherein said biopolymers are synthesized on said surface in multiple arrays and said support is subsequently diced into individual arrays of biopolymers on a support.

64. (original) A method according to claim 50 further comprising exposing the array to a sample and reading the array.

65. (original) A method according to claim 64 comprising forwarding data representing a result obtained from a reading of the array.

66. (original) A method according to claim 65 wherein the data is transmitted to a remote location.

67. (original) A method according to claim 64 comprising receiving data representing a result of an interrogation obtained by the reading of the array.

68. (previously presented) A method according to Claim 50 wherein said top element is stationary and said bottom element is moved relative to said top element to bring said support and said dispensing system for dispensing reagents for the synthesis of said biopolymers into a dispensing position relative to discrete sites on said surface of said support.